Interior Salt Flat

Rarity Rank: S1/G1
Synonyms: Salt Seepage Barren, Salt Barren, Interior Saline Soil Marsh
Ecological Systems: CES203.291 West Gulf Coastal Plain Saline Glade

General Description:

- Natural, treeless areas typically only a few acres in size (range < 1 ac to 20 ac)
- Arise on low flat terraces adjacent to small streams
- Frequent flooding during and immediately following storm events
- Expansive barren soil areas interspersed with variably dense, often monospecific, herbaceous vegetation
- Plant community dominated by halophytic (salt-tolerant) forbs, grasses and grass-like plants, and some scattered trees
- Zonal plant configurations occur and appear related to micro-relief and consequent moisture patterns
- May be associated with inland subsurface salt domes
- Soils with high levels of exchangeable sodium, high alkalinity, very poor movement of water and air, and resistance to both wetting and drying
- Subsoil that acts as a dense clay pan restricting tree root penetration and water movement

Plant Community Associates

Common grass and forb species include:

Eleocharis spp. (spike sedges),
Distichlis spicata (spike grass),
Juncus spp. (rushes),
Alternanthera sp. (a chaff-flower),
Portulaca sp. (portulaca),
Hibiscus lasicarpus (hibiscus),
Solidago sempervirens (seaside goldenrod),
Iva angustifolia (marsh-elder),
Bacopa monnieri (coastal waterhyssop),
Scirpus spp. (bullrushes),
Fimbristylis spp. (fimbry-sedge),
Pluchea sp. (marsh-fleabane),
Spartina pectinata (prairie cordgrass),
Heliotropium curassavicum (heliotropes)

Common shrub species include:

Baccharis halimifolia (saltbush),
Sideroxylon lanuginosum (chittum wood)
Crataegus berderifolia (barberry hawthorn),

Federally-listed plant & animal species:

Geocarpon minimum (earthfruit) — Threatened; G2; S1
(may be possible on higher sites)

Natural Communities of Louisiana

Range:

Restricted to the Upper West Gulf Coastal Plain in north central to northwest Louisiana

Threats & Management Considerations:

Interior salt flats are a naturally rare association. In presettlement times total area was estimated at less than 2,000 acres, and only an estimated 25 to 50 % remains today. Salt flats have mainly been lost to land use changes. Threats to this natural community include construction of roads, pipelines and utilities, off-road vehicle use, physical damage from timber harvesting, contamination by chemicals (herbicides, fertilizers), and trash dumping.

Use of appropriate management activities and developing a compatible management plan prevents destruction or degradation of this habitat type and promotes long-term maintenance of healthy interior salt flats. Such management strategies should include:

- Preventing conversion of existing flats to other land uses
- No bedding or other soil disturbance that may alter natural water flow patterns
- Prohibiting off-road vehicle use or restricting use to existing trails
- Preventing use of flats or barren openings as logging sets
- Prohibit trash dumping
- Do not apply fertilizer for pasture “improvement”, and prevent off-target application when fertilizing large blocks of timber from aircraft

Salt flat with soil damage from off- road vehicle use.